IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of DUMITRAS et al.

Group Art Unit: 2614

Application No.: 10/743,722

Examiner: TO BE ASSIGNED

Filed: December 24, 2003

For: METHOD AND SYSTEM FOR VIDEO ENCODING USING A
        VARIABLE NUMBER OF B FRAMES

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR § 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449.   Unless otherwise indicated herein, one copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. The filing of this Information Disclosure Statement and the enclosed PTO Form No. 1449, shall not be construed as an admission that the information cited is prior art, or is considered to be material to patentability as defined in 37 C.F.R. § 1.56(b). The paragraphs marked below are applicable. It is believed that no fees other than those indicated below are due, but authorization is hereby given to charge any additional fees due, or to credit any overpayment, to deposit account 11-0600.

■   1.   This Information Disclosure Statement is being filed (a) within three months of the filing date of a national application other than a continued prosecution application under 37 C.F.R. §1.53(d), (b) within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, (c) before the mailing date of a first Office Action on the merits in the present application, OR (d) before the mailing of a first office action after filing of a request for continued examination. No certification or fee is required.

☐   2.   This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before

the mailing date of a final action, Notice of Allowance, or any action that otherwise closes prosecution.

☐   a.   I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).

☐   b.   I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).

☐   c.   Please debit Deposit Account No. 11-0600 in the amount of $180.00 in payment of the fee under 37 CFR §1.17(p) to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached. 37 CFR §1.97(c)(2).

☐   3.   This Information Disclosure Statement is being filed after the mailing date of a final action, Notice of Allowance or an action that otherwise closes prosecution, but before payment of the Issue Fee. Applicant(s) hereby request(s) that the Information Disclosure Statement be considered. Please debit Deposit Account No. 11-0600 in the amount of $180.00 in payment of the petition fee under 37 CFR §1.17(p) to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.

☐   a.   I hereby certify that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in any counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(1).

☐   b.   I hereby certify that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 CFR §1.97(e)(2).

☐   4.   Relevance of the non-English language reference(s) is discussed in the present specification.

☐   5.   The reference(s) was/were cited in a counterpart foreign application. An English language version of the foreign search report is attached for the Examiner's information.

☐   6.   A concise explanation of the relevance of the non-English language reference(s) appears in the Appendix attached hereto.

■   7.   The Examiner's attention is directed to co-pending U.S. Patent Application No. 10/658,938 filed September 9, 2003, which is directed to related technical subject matter. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination of the present application.
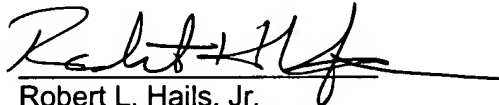
❏   8.   This application is one of a series of related applications, identified in the attached Appendix, which are directed to related technical subject matter. The identification of those U.S. Patent Applications is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited applications and the art cited therein during the examination.

❏   9.   The reference(s) was/were cited by or submitted to the Office in parent application No._____, filed _____, which is relied upon for an earlier filing date under 35 U.S.C. §120. Thus, copies of these references are not attached. 37 CFR §1.98(d).
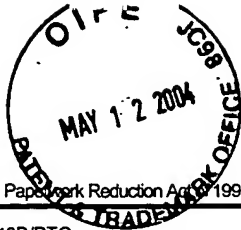
Respectfully submitted,

KENYON & KENYON

Date: 5/12/04

Robert L. Hails, Jr.
Registration No. 39,702

Kenyon & Kenyon & Kenyon
1500 K Street, N.W.
Washington, D.C. 20005
Telephone: (202) 220-4200
Facsimile: (202) 220-4201

Substitute for form 1449B/PTO	**Complete if Known**	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*	Application Number	10/743,722
	Filing Date	December 24, 2003
	First Named Inventor	DUMITRAS et al
	Art Unit	2614
	Examiner Name	Not assigned

Sheet	1	of	2	Attorney Docket Number	2777/3276

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T [2]
		Jungwoo Lee and Bradley W. Dickinson, "Temporally Adaptive Motion Interpolation Exploiting Temporal Masking in Visual Perception," *IEEE Transactions on Image Processing*, vol. 3, No. 5, pp. 513-526, September 1994.	
		Austin Lan et al, "Scene-context-dependent reference-frame placement for MPEG video coding", *IEEE Transactions on Circuits and Systems for Video Systems for Video Technology*, vol. 9, no. 3, April 1999	
		Jungwoo Lee et al., "Rate-distortion optimized frame type selection for MPEG encoding," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 7, no. 3, pp. 501-510, June 1997.	
		Tamer Shanableh et al., "The importance of the bi-directionally predicted picutres in video streaming," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 11, no. 3, pp. 402-414, March 2001.	
		W.A.C. Fernando et al., "Scene adaptive video encoding for MPEG and H.263+ video," *IEEE Trans. on Consumer Electronics*, vol. 47, no. 4, pp. 76-769, November 2001.	
		Xiaodong Gu et al, "Implementing dynamic GOP in video encoding," in *IEEE International Conference on Multimedia and Expo (ICME)*, Baltimore 2003, vol. 1, pp. 349-352.	
		Chung-Lin Huang et al, "A robust scene-change detection method for video segmentation", *IEEE Transaction on Circuits and Systems for Video Technology*", vol. 11, no. 12, December 2001	
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		H.C. Liu et al., "Automatic determination of scene changes in MPEG compressed video," in *Proc. IEEE Symp. Circuits and Systems*, Seattle, 1995, vol. 1, pp. 764-767.	
		J. Lee et al., "Scene-adaptive motion interpolation structures based on temporal masking in human visual perception," in *Proc. SPIE Conference on Visual Comm. and Image Processing*, Cambridge, 1993, pp. 499-510.	

Examiner Signature		Date Considered	

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Sheet	2	of	2	Attorney Docket Number	2777/3276

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		A. Hanjalic, "Shot-boundary detection: Unraveled and resolved?," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 12, no. 2, pp. 90-105, February 2002.	
		T. Vlachos, "Cut detection in video sequences using phase correlation," *IEEE Signal Processing Letters*, vol. 7, no. 7, pp. 173-175, July 2000.	
		U. Gargi et al., "Performance characterization of video shot change detection methods," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 10, no. 1, pp. 1-13, February 2000.	
		R.M. Ford et al., "Metrics for shot boundary detection in video sequences," *Multimedia Systems*, vol. 8, pp. 37-46, 2000.	
		B-L Yeo et al., "Rapid scene analysis on compressed video," *IEEE Transactions on Circuits and Systems for Video Technology*, vol. 5, no. 6, pp. 533-544, December 1995.	
		H.J. Zhang et al., "Video parsing and browsing under compressed data," *Multimedia Tools and Applications*, vol. 1, no. 1, pp. 89-111, March 1995.	
		Z. Cernekova et al., "Shot detection in video sequences using entropy-based metrics," in *Proceedings of IEEE International Conference on Image Processing*, 2002, vol. 3, pp. 421-424.	
		B. Shahraray, "Scene change detection and content-based sampling of video sequences," in *Digital Video Compression: Algorithms and Technologies*, 1995, vol. SPIE-2419, pp. 2-13.	
		J. Bescos et al., "Multidimensional comparison of shot detection algorithms," in *Proceedings of IEEE International Conference on Image Processing*, 2002, vol. 2, pp. 401-403.	
		J. Meng et al., "Scene change detection in a MPEG compressed video sequence," in *Digital Video Compression: Algorithms and Technologies*, 1995, vol. SPIE-2419, pp. 14-25.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.